

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/054951 A3

(51) International Patent Classification⁷: **G03F 7/033, 7/40**

(21) International Application Number:

PCT/JP2004/017534

(22) International Filing Date:

18 November 2004 (18.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2003-401563 1 December 2003 (01.12.2003) JP

2004-265693 13 September 2004 (13.09.2004) JP

(71) Applicant (for all designated States except US): **TOKYO OHKA KOGYO CO., LTD.** [JP/JP]; 150, Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WASHIO, Yasushi** [JP/JP]; c/o TOKYO OHKA KOGYO CO., LTD., 150, Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 (JP). **SAITO, Koji** [JP/JP]; c/o TOKYO OHKA KOGYO CO., LTD., 150, Nakamaruko, Nakahara-ku, Kawasaki-shi, Kanagawa 211-0012 (JP).

(74) Agents: **TANAI, Sumio** et al.; 2-3-1, Yaesu, Chuo-ku, Tokyo 104-8453 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

22 September 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **THICK FILM PHOTORESIST COMPOSITION AND METHOD OF FORMING RESIST PATTERN**

(57) Abstract: A negative thick film photoresist composition with improved alkali developability is provided. The composition comprises: (A) a resin component containing (a) from 61 to 90% by weight of a structural unit derived from a cyclic alkyl (meth)acrylate ester, and (b) a structural unit derived from a radical polymerizable compound containing a hydroxyl group, (B) a polymerizable compound containing at least one ethylenic unsaturated double bond, (C) a photopolymerization initiator, and (D) an organic solvent.



WO 2005/054951 A3